

*CLAIM AMENDMENTS*

3. (Amended) An isolated cancer peptide consisting essentially of a portion of SEQ ID NO: 4, wherein the portion comprises (i) amino acids 55-62 of SEQ ID NO: 4 or (ii) amino acids 127-136 of SEQ ID NO: 4, or a functionally equivalent variant thereof, wherein the functionally equivalent variant has at least 85% sequence homology with the cancer peptide, wherein said cancer peptide or functionally equivalent variant is immunologically recognized by antigen specific cytotoxic T lymphocytes, wherein said antigen is an epitope of a protein having the amino acid sequence of SEQ ID NO: 4, wherein said cancer peptide is about 10 amino acids in length and optionally further consists of 1 to about 10 amino acids at the N-terminus of the cancer peptide.

5. (Amended) The isolated cancer peptide of claim 3, wherein the cytotoxic T lymphocytes are restricted by a Major Histocompatibility Complex (MHC) molecule.

6. (Amended) The isolated cancer peptide of claim 5, wherein the MHC molecule is an MHC class I molecule.

7. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide is derived from a cancer selected from the group consisting of: a non-Hodgkins lymphoma, leukemia, Hodgkins lymphoma, lung cancer, liver cancer, metastases, melanoma, adenocarcinoma, thymoma, colon cancer, uterine cancer, breast cancer, prostate cancer, ovarian cancer, cervical cancer, bladder cancer, kidney cancer, pancreatic cancer and sarcoma.

8. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide is presented by a primary breast tumor cell or by a melanoma cell.

10. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide consists essentially of amino acids 53-62 of SEQ ID NO: 4.

11. (Cancelled)

12. (Amended) The isolated cancer peptide of claim 3, further consisting essentially of 1 to about 5 amino acids at the N-terminus of the cancer peptide.

13. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide consists essentially of amino acids 54-62 of SEQ ID NO: 4.

14. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide consists essentially of amino acids 48-62 of SEQ ID NO: 4.

15. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide consists essentially of amino acids 43-62 of SEQ ID NO: 4.

16. (Cancelled)

26. (Amended) A composition comprising one or more of the isolated cancer peptides of any of claims 3, 5-8, and 10, and 12-15~~16~~.

28. (Amended) An immunogen comprising one or more of the isolated cancer peptides of any of claims 3, 5-8, and 10, 12-15-16 alone or in combination with at least one immunostimulatory molecule, wherein the immunogen elicits a response by an antigen specific T lymphocyte.

29. (Previously Presented) The immunogen of claim 28, wherein the immunostimulatory molecule is an MHC molecule.

67. (Amended) The isolated cancer peptide of claim 6, wherein the MHC class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

68. (Amended) The isolated cancer peptide of claim 67, wherein the MHC class I molecule is HLA-A31.

69. (Amended) The isolated cancer peptide of claim 3, wherein the isolated cancer peptide consists essentially of amino acids 53 and 55-62 of SEQ ID NO: 4 and amino acid 54 of SEQ ID NO: 4 is substituted with a different amino acid.

70. (Amended) The isolated cancer peptide of claim 69, wherein the different amino acid is threonine.

71. (Amended) The isolated cancer peptide of claim 69, wherein the different amino acid is selected from the group consisting of alanine, isoleucine, valine, and leucine.

72. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide consists essentially of amino acids 54-62 of SEQ ID NO: 4 and further consists essentially of an additional amino acid at the N-terminus of the cancer peptide.

73. (Amended) The isolated cancer peptide of claim 72, wherein the additional amino acid is valine or threonine.

74. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide consists essentially of amino acids 52-62 of SEQ ID NO: 4.

75. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide consists essentially of amino acids 51-62 of SEQ ID NO: 4.

76. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide consists essentially of amino acids 50-62 of SEQ ID NO: 4.

77. (Amended) The isolated cancer peptide of claim 3, wherein the cancer peptide consists essentially of amino acids 49-62 of SEQ ID NO: 4.

78. (Amended) An immunogen comprising one or more of the isolated cancer peptides of any of claims 67-77 alone or in combination with at least one immunostimulatory molecule, wherein the immunogen elicits a response by an antigen specific T lymphocyte.

79. (Previously Presented) The immunogen of claim 78, wherein the immunostimulatory molecule is a MHC molecule.

80. (Previously Presented) The immunogen of claim 79, wherein the MHC molecule is an MHC Class I molecule.

81. (Previously Presented) The immunogen of claim 80, wherein the MHC Class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

82. (Previously Presented) The immunogen of claim 80, wherein the MHC Class I molecule is HLA-A31.

83. (Previously Presented) The immunogen of claim 29, wherein the MHC molecule is a MHC Class I molecule.

84. (Previously Presented) The immunogen of claim 83, wherein the MHC Class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

85. (Previously Presented) The immunogen of claim 83, wherein the MHC Class I molecule is HLA-A31.

86. (Amended) A composition comprising one or more of the isolated cancer peptides of any of claims 67-77.

87. (New) The isolated cancer peptide of claim 3, wherein the cancer peptide is about 10 amino acids in length.

88. (New) An isolated cancer peptide consisting of a portion of SEQ ID NO: 4, wherein the portion consists of (i) amino acids 55-62 of SEQ ID NO: 4; (ii) amino acids 127-136 of SEQ ID NO: 4; (iii) amino acids 53-62 of SEQ ID NO: 4; (iv) amino acids 54-62 of SEQ ID NO: 4; (v) amino acids 48-62 of SEQ ID NO: 4; (vi) amino acids 43-62 of SEQ ID NO: 4; (vii) amino acids 52-62 of SEQ ID NO: 4; (viii) amino acids 51-62 of SEQ ID NO: 4; (ix) amino acids 50-62 of SEQ ID NO: 4; (x) amino acids 49-62 of SEQ ID NO: 4; (xi) amino acids 53-62 of SEQ ID NO: 4, in which amino acid 54 is substituted with a different amino acid; or (xii) amino acids 54-62 of SEQ ID NO: 4 and an additional amino acid at the N-terminus of amino acids 54-62; wherein said cancer peptide is immunologically recognized by antigen specific cytotoxic T lymphocytes, wherein the antigen is an epitope of a protein having the amino acid sequence of SEQ ID NO: 4.

89. (New) The isolated cancer peptide of claim 88, wherein the different amino acid is threonine.

90. (New) The isolated cancer peptide of claim 88, wherein the different amino acid is alanine, isoleucine, valine, or leucine.

91. (New) The isolated cancer peptide of claim 88, wherein the additional amino acid is valine or threonine.

92. (New) The isolated cancer peptide of claim 88, wherein the cytotoxic T lymphocytes are restricted by an MHC molecule.

93. (New) The isolated cancer peptide of claim 92, wherein the MHC molecule is an MHC class I molecule.

94. (New) The isolated cancer peptide of claim 93, wherein the MHC class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

95. (New) The isolated cancer peptide of claim 94, wherein the MHC class I molecule is HLA-A31.

96. (New) The isolated cancer peptide of claim 88, wherein the cancer peptide is derived from a cancer selected from the group consisting of: a non-Hodgkins lymphoma, leukemia, Hodgkins lymphoma, lung cancer, liver cancer, metastases, melanoma, adenocarcinoma, thymoma, colon cancer, uterine cancer, breast cancer, prostate cancer, ovarian cancer, cervical cancer, bladder cancer, kidney cancer, pancreatic cancer and sarcoma.

97. (New) The isolated cancer peptide of claim 88, wherein the isolated cancer peptide is presented by a primary breast tumor cell or by a melanoma cell.

98. (New) The isolated cancer peptide of claim 88, further consisting of 1 to about 5 amino acids at the N-terminus of the cancer peptide.

99. (New) A composition comprising one or more of the isolated cancer peptides of any of claims 88-98.

100. (New) An immunogen comprising one or more of the isolated cancer peptides of any of claims 88-98, alone or in combination with at least one immunostimulatory molecule, wherein the immunogen elicits a response by an antigen specific T lymphocyte.

101. (New) The immunogen of claim 100, wherein the immunostimulatory molecule is an MHC molecule.

102. (New) The immunogen of claim 101, wherein the MHC molecule is an MHC Class I molecule.

103. (New) The immunogen of claim 102, wherein the MHC Class I molecule is selected from the group consisting of HLA-A31, HLA-A3, HLA-A11, HLA-A33, and HLA-A68.

104. (New) The immunogen of claim 103, wherein the MHC Class I molecule is HLA-A31.